DAILY ACTIVITY REPORT

Report # 2 **DATE** Jan 20, 2017 S M T W TH ***F*** S

Field Investigation Manager: Tim Thompson

WEATHER Bright Sun ***Clear to Partly Cloudy*** Overcast Rain

TEMPERATURE °F <32° ***32-45***° 45-60° 60-70° 70-85°

WIND ***Still*** Mod. High

HUMIDITY Dry ***Mod.*** Humid

DAYTIME TIDES

Date	Day	Time	Hgt
01/20	Fri	04:15 AM	5.53 L
01/20	Fri	10:46 AM	11.28 H
01/20	Fri	06:01 PM	2.67 L

TASK: ☐ Industrial Area Soils ☐ Industrial Area Groundwater ☐ Surface Water ☑ Sediment ☐ MIS

SUBCONTRACTORS/VISITORS ON SITE: Tim Thompson (SEE); David Browning (BES); Kim Hawkins (HDR); Hailey Fitterer (HDR), Ellen Brown (USACE), Dale Dickinson (MSS), Bill Jaworski (MSS)

EQUIPMENT ON SITE: MSS R/V Nancy Anne, MSS vibracore system

WORK PERFORMED (INCLUDE ANY SAMPLES COLLECTED):

1. Collected cores at FSP-designated stations. Cores collected, brought onboard, and transported to ARI for processing on 1/25/2017. Core collection data provided in Table 1
2. Field Core Collection logs also attached to this report
3. Transferred cores under COC to ARI (COC attached)

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

- Navigation checks done at NAID Channel Marker prior to initiating sampling.

HEALTH AND SAFETY LEVELS AND ACTIVITIES: **Tailgate Meeting Held ☑**

- H&S briefing held on-board Nancy Anne
- Site safety meeting form attached to this report.

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:

- All coring locations we well-worked glacial till. Had trouble from the outset collecting the sandy/gravelly till into the core tube – especially in Quadrant J8 (Figure 1). Rejected the first sample collected at J8-c5 for poor recovery, but on subsequent attempts still managed to only get approximately 2 ft of material in 34% recovery
- Attempted to move offshore of J8-c5, to J8-c3 in an effort to collect more material. Similar material and problems encountered there, as well. Did manage to get 2.2 ft of material with 46.8% recovery

SPECIAL NOTES:

- None

TOMORROW'S EXPECTATIONS:

- No work till Monday

ATTACHMENTS:

- Figure 1. Glacial till from rejected core at J8-c5
- Table 1 EHOU Core Collection Data
- Field Coring Logs
- Chain-of-Custody form
- Site Safety Meeting form

PREPARED BY: Tim Thompson
SIGNATURE: Filed electronically.

Figure 1. Glacial till from rejected core at J8-c5

Table: EHOU Core Collection Data

Grid Cell Station	Attempt	Collection Date	Collection Time	FSP Target Sampling Locations		Actual Sampling Locations		Measured Water Depth (ft)	Tidal Height at Time of Collection (ft MLLW)	Corrected Collection Depth (ft MLLW)	Penetration (ft)	Acquisition (ft)	% Recovery	Comment
				Latitude (NAD 83 N)	Longitude (NAD 83 W)	Latitude (NAD 83 N)	Longitude (NAD 83 W)							
J8-c5	c1	1/20/2017	9:14:34	47°37.11550	122°30.20283	47°37.11574	122°30.20129	25.8	12.2	-13.6	4.65	2.0	43.0%	Rejected
J8-c5	c2	1/20/2017	9:40:29	47°37.11550	122°30.20283	47°37.11528	122°30.20146	26.5	12.6	-13.9	5	1.7	34.0%	
k8-c5	c1	1/20/2017	10:17:54	47°37.11633	122°30.14167	47°37.11668	122°30.14176	16.8	12.9	-3.9	7	4.7	67.1%	
L8-c5	c1	1/20/2017	10:52:28	47°37.11683	122°30.08100	47°37.11640	122°30.08187	15.1	12.9	-2.2	7	4.5	64.3%	
K7-c5	c1	1/20/2017	11:10:45	47°37.15717	122°30.14300	47°37.15716	122°30.14245	22.8	12.8	-10.0	7	4.6	65.7%	
J7-c5	c1	1/20/2017	11:37:10	47°37.15633	122°30.20383	47°37.15569	122°30.20065	16.3	12.5	-3.8	7	3.6	51.4%	
J8-c3	c1	1/20/2017	12:14:09	---	---	47°37.13253	122°30.19381	17.1	11.9	-5.2	4.7	2.2	46.8%	Attempted a second location in Quadrant J8

J8-C5 Rejected

Sediment Core Drive Log

Core 1

Job: CHOC

Job No:

Field Reps: Thompson/Brown

Contractor:

Core Location: J8-C5

Date: 1/20/2017 Time: 09:14

Attempt #: Accept/Reject

Sample Method: Vibracore

Proposed Coordinates	Actual Coordinates
N: 47 35 693 E: 122 30 12.17	N: 47 3606.74464 E: 122 30 12.07758
Mudline: —	Mudline: 25.8'
Core Drive: ~~7~~ 7'	Core Drive: 4.65' Core Recovery:

Tide Measurements (Datum:)

Time/Height:

Time/Height:

DTS Boat:

DTS Lead Line: 25.8'

Mudline Elevation:

REJECTED

Description:

(free fall, fingers inverted, vibration needed to drive/extract, estimation of density, debris encountered, slopes, refusal, mudline conditions, drive action, etc.)

Measurement (to nearest 0.1 foot):

Core Tube Length:

REJECTED

Avg. % Recovery:

Avg. % Compaction:

Section:	Length:	Description at Cuts:
A	=	~6" of soft material over
B	=	till: rock & gravel.
C	=	
D	=	

Total Drive: Length Recovered:

Notes: Hard till, minimal penetration

J8-C5 Core 2

Sediment Core Drive Log

Job: EHOU

Job No:

Field Reps: Tim Thompson

Contractor: HDR/SEE

Core Location: J8-C5 core

Date: 1/20/2016 Time: 9:40

Attempt #: 2 Accept/Reject See notes

Sample Method: Vibracore

Proposed Coordinates	Actual Coordinates
N: 47 35 6.73 E: 122 30 12.17	N: 47 37 06.91686 E: 122 30 12.08778
Mudline:	Mudline: 26.5
Core Drive:	Core Drive: 5' 1.7' Core Recovery: 34%

DTS Boat:

DTS Lead Line: 26.5 - 12.64 tide

Mudline Elevation: 13.96 ft MLLW

Tide Measurements (Datum: MLLW)

Time/Height: 9:48 / 12.639 Seattle tides

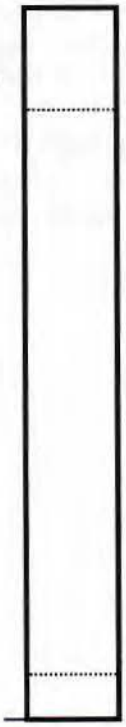
Time/Height: 26.5 nominal - 12.64 actual +13.96 ft MLLW

Description:

(free fall, fingers inverted, vibration needed to drive/extract, estimation of density, debris encountered, slopes, refusal, mudline conditions, drive action, etc.)

Measurement (to nearest 0.1 foot):

Core Tube Length:



Avg. % Recovery: 34%

Avg. % Compaction:

Section:	Length:	Description at Cuts:
A =		
B =		
C =		
D =		

Total Drive: Length Recovered:

Notes: Core catcher with hard, poorly sorted clayey sand w/ gravel. Rock > 5cms

J8-C3

Sediment Core Drive Log

Job: EHOU 2016

Job No:

Field Reps: Thompson

Contractor: HDR/SEE/MSS

Core Location: J8-C3

Date: 1/20/17 Time: 12:19

Attempt #: 1 Accept/Reject

Sample Method: Vibracore

Proposed Coordinates	Actual Coordinates
N: E:	N: 47 37 07.95175 E: 122 30 11.6285
Mudline: 100ft due N of J8-C5	Mudline: 17.1
Core Drive:	Core Drive: 4.7 Core Recovery: 2.2 (46.8%)

DTS Boat:

DTS Lead Line: 17.1
11.9

Mudline Elevation: 5.2 MLLW

Tide Measurements (Datum: MLLW) Seattle

Time/Height: 12:18 11.996
12:24 11.901

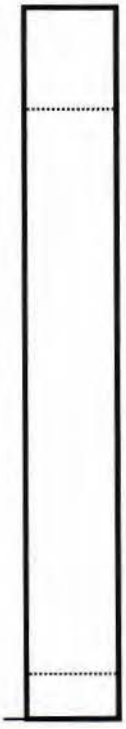
Time/Height:
Bainbridge is Seattle + 5'

Description:

(free fall, fingers inverted, vibration needed to drive/extract, estimation of density, debris encountered, slopes, refusal, mudline conditions, drive action, etc.)

Measurement (to nearest 0.1 foot):

Core Tube Length:



Avg. % Recovery: 46.8%

Avg. % Compaction:

Section:	Length:	Description at Cuts:
A =		
B =		
C =		
D =		

Total Drive: Length Recovered:

Notes:

L8-CS c1

Sediment Core Drive Log

Job: EHOU

Job No:

Field Reps: Thomp

Contractor: HDR/SEE/MSS

Core Location: L8-CS

Date: 1/20/2017 Time: 10:52

Attempt #: 1 Accept/Reject

Sample Method: Vibracore

Proposed Coordinates	Actual Coordinates
N: 47 37 7.01 E: 122 30 4.86	N: 47 37 06.9839 N E: 122 30 04.91208 W
Mudline:	Mudline: 15.1
Core Drive:	Core Drive: 7' Core Recovery: 4.5' 64.2%

DTS Boat:

DTS Lead Line: 15.1' 12.9

Mudline Elevation: -2.2 MLLW

Tide Measurements (Datum: MLLW) Seattle

Time/Height: 10:54 12.92

Time/Height: 11:00 12.91

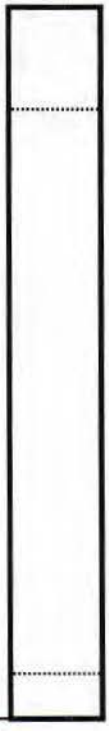
} Bainbridge tide Seattle + 5'

Description:

(free fall, fingers inverted, vibration needed to drive/extract, estimation of density, debris encountered, slopes, refusal, mudline conditions, drive action, etc.)

Measurement (to nearest 0.1 foot):

Core Tube Length:



Avg. % Recovery: 64.2%

Avg. % Compaction:

Section:	Length:	Description at Cuts:
A =		
B =		
C =		
D =		

Total Drive: Length Recovered:

Notes:

Sediment Core Drive Log

Job: Ecology

Job No:

Field Reps: Tim Thompson

Contractor: HDR/SSE/MSS

Core Location: KS-C5

Date: 1/20/2017 Time: 10:17

Attempt #: 1 Accept/Reject

Sample Method: Vibracore

Proposed Coordinates	Actual Coordinates
N: 47376.98 E: 122 30 8.50	N: 47 37 07.00104 E: 122 30 08.50542
Mudline:	Mudline: 16.8
Core Drive:	Core Drive: 7' Core Recovery: 68%
	Recovery 4.7'

Tide Measurements (Datum: MLLW)

Time/Height: 10:18 +12.87 > Bainbridge = Seattle + 5'

Time/Height: 10:24 +12.9

DTS Boat:

DTS Lead Line: 16.8 - 12.9

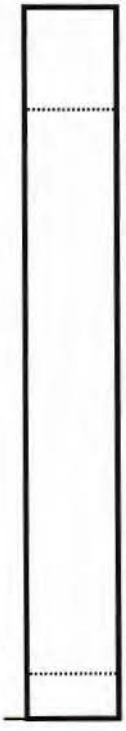
Mudline Elevation: -2.9' MLLW

Description:

(free fall, fingers inverted, vibration needed to drive/extract, estimation of density, debris encountered, slopes, refusal, mudline conditions, drive action, etc.)

Measurement (to nearest 0.1 foot):

Core Tube Length:



Avg. % Recovery:

Avg. % Compaction:

Section:	Length:	Description at Cuts:
A =		
B =		
C =		
D =		

Total Drive: Length Recovered:

Notes:

K7-C5 #1

Sediment Core Drive Log

Job: EHOU 2016

Job No:

Field Reps: Thompson

Contractor: HDR/SEE/MSS

Core Location: K7-C5

Date: 1/10/2017 Time: ~~11:10~~ ~~10:17~~ 11:09 (W)

Attempt #: 1 Accept/Reject

Sample Method: Vibracore

Proposed Coordinates	Actual Coordinates
N: 47 37 9.43 E: 122 30 8.58	N: 47 37 09.42948 E: 122 30 08.54700
Mudline:	Mudline: 22.8 (nominal)
Core Drive:	Core Drive: 7 Core Recovery: 4.6' 65.7%

DTS Boat:

DTS Lead Line: 22.8' ~~12.8~~ ~~STET~~ (wrong time ~~11~~)

Mudline Elevation: ~~-12.0' MLLW~~ correct time + tide (W)

Tide Measurements (Datum: MLLW)

Time/Height: ~~11:12~~ (wrong time) 2.82

11:18 (W) 12.767

Time/Height: Correct time

Bainbridge Tide = Seattle + 5'

Description:

(free fall, fingers inverted, vibration needed to drive/extract, estimation of density, debris encountered, slopes, refusal, mudline conditions, drive action, etc.)

Measurement (to nearest 0.1 foot):

Core Tube Length:

Avg. % Recovery: 64.2%

Avg. % Compaction:

Section:	Length:	Description at Cuts:
A =		
B =		
C =		
D =		

Total Drive: Length Recovered:

Notes:

J7-C5

Sediment Core Drive Log

Job: EHOU 2016 | Core Location: J7-C5

Job No: | Date: 1/20/2017 Time: 11:37

Field Reps: Thompson | Attempt #: 1 Accept/Reject See notes

Contractor: HRD/SEEC/MSI | Sample Method: Vibracor

Proposed Coordinates	Actual Coordinates
N: 47 37 9.58 E: 122 30 12.23	N: 47 35 09.34140 E: 122 30 12.03900
Mudline:	Mudline: 16.3
Core Drive:	Core Drive: 6.7 Core Recovery: 3.6 (54%)

DTS Boat:

DTS Lead Line: 16.3 / 12.5

Tide Measurements (Datum: MLLW)

Time/Height: 11:36 12.594 } Bainbridge = Seattle + 5'

Time/Height: 11:42 12.529

Mudline Elevation: -3.8' MLLW

Post-processing note. This depth measurement likely inaccurate. J7-C5 based on bathy should be ~ -20' MLLW.

Description:
(free fall, fingers inverted, vibration needed to drive/extract, estimation of density, debris encountered, slopes, refusal, mudline conditions, drive action, etc.)

Measurement (to nearest 0.1 foot):

Core Tube Length:

Avg. % Recovery: 56%

Avg. % Compaction:

Section:	Length:	Description at Cuts:
A =		
B =		
C =		
D =		

Total Drive: Length Recovered:

Notes: As target 9qu

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: HDR / SEE	Phone: 206 418 6173	Date: 1/20/2017	Ice Present?
Client Contact: Tim Thompson		No. of Coolers: —	Cooler Temps:
Client Project Name: Eagle Harbor 2016 Monitoring			
Client Project #:	Samplers: HDR/SEE/MSS		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Archive 9/25								Notes/Comments
J8-C5	1/20/17	0940	Sed	1	X								
K8-C5		1017		1	X								
L8-C5		1052		1	X								
K7-C5		1110		1	X								
J7-C5		1137		1	X								
J8-C3		1214		1	X								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Archive cores at 4°C until processing on 01/25/17	Printed Name: Tim Thompson	Printed Name: C. OREIRO	Printed Name:	Printed Name:
	Company: SEE	Company: ARI	Company:	Company:
	Date & Time: 01/20/17 1520	Date & Time: 1/20/17 1520	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Site Safety Meeting Form

Project Name: Eagle Harbor
Date: 1/20/2017
Project Number:
Location: Bainbridge Island Marina
Time: 0830
Instructor: Thompson/Dickinson

Safety Topics Presented

JHA/STAR: Slip-trip-fall. Dock slick w/ ice.
Overhead hazards - helmet required when overhead.
Exclusion zone, decon zone, clean zone
Lifting technique. Man-overboard procedures. Pinch points on boat.

Lessons Learned: None

BEST O&F: None offered

General Safety Topics: PPE, especially hard hats and PFDs covered.

Name	Attendee's Signature
Tim Thompson SEE	
Dale Dickinson BEE MSS	
Ellen Brown USACE	
David Brownin BES	
Hailey Fifield HDR	
Kim Hawkins ADR	
Susannah Edwards Ecolog	

Site Safety Plan
Acknowledgment Form

This project requires the following: that you read and comply with this Health and Safety Plan; that you be supplied with proper personal protective equipment (PPE), [including respirators]; and that you be trained on the use of the provided PPE. Personnel who are not respirator trained, medical evaluated, and provided a respirator will evacuate the work area if conditions require an upgrade to EPA/OSHA Level C PPE which includes respiratory protection. When respirator use is not required, voluntary respirator use is permissible, if such respirator use will not in itself create a hazard, under this SSHP. By signing this acknowledgment form, you are acknowledging that HDR has met these obligations to you.

I Have Reviewed, Understand and Agree to Follow the HDR Site Safety and Health Plan for the Eagle Harbor East Operable Unit Year 22 Monitoring Program.

Name (Print)	Signature	Affiliation	Date
Tim Thompson		SES	1/20/2017
Dave Brown		SES	1/20/2017
Dale Dickison			
Kim Hawkins		HDR	1/20/17
Hailey Fitterer		HDR	1/20/17